

REMARKS

This application has been carefully reviewed in light of the Office Action dated November 20, 2003 (Paper No. 10). Claims 45 to 61 are in the application, of which Claims 45 and 58 are independent. Reconsideration and further examination are respectfully requested.

Applicants acknowledge their election of claims directed to species I, comprising Figures 1, 3B, 4 and 5A through 5D. New claims 45 to 61 read on the elected species.

The abstract has been rewritten as requested.

Formal objections and rejections were lodged against the claims, and rejections were entered under 35 U.S.C. § 102(b) and § 103(a) over U.S. Patent No. 3,929,071 (Cialone) and over Cialone in view of U.S. Patent No. 3,708,798 (Hildenbrand) or U.S. Patent No. 6,142,617 (Barinaga). All claims have been cancelled, without prejudice or disclaimer of subject matter, and without conceding the correctness of these objections and rejections. In their place, Claims 45 to 61 have been substituted, and are believed allowable over the cited art, for at least the following reasons.

The invention relates to an off-carriage type of ink tank directly containing ink. In order to provide for a stable supply of ink, the invention includes structure intended to suppress the problem where a pigment or resin-fine particle in a pigment ink is deposited at a bottom portion of the ink tank, such that density of ink supplied to a recording apparatus changes over time. Because density changes over time, recording density is uneven.

According to one feature of the invention, such a problem is largely suppressed through the provision of a connecting portion to which an ink deriving tube and an air introducing tube are connected and which are deviated to one of side walls with respect to a center portion of a bottom surface of the ink container. Because of this offset, agitation can be expected as air is introduced to the ink container and ink is derived therefrom. In particularly preferred embodiments, such as those covered by Claim 58, an ink deriving connection element is placed at a position relative closer to a side surface of the ink container and an air introducing connection element is placed at a position relatively closer to a center thereof. Particularly in this arrangement, ink near the ink deriving portion is easily moved during introduction of air, so as to cause agitation even when a small amount of ink is derived.

In contrast, Cialone discloses an ink tank provided with two connecting portions, as shown in Figure 6 thereof. One connecting portion is provided close to a wall of the ink tank to derive ink, but the other is provided at a center portion of the ink tank. Moreover, this center portion introduces ink for recovery, and does not introduce air.

Thus, Cialone is silent concerning the claimed feature that a connection portion to which an ink deriving tube and an air introducing tube are connected is disposed at a position deviated from a center portion of the ink tank.

Hildenbrand and Barinaga have both been reviewed, but are not seen to add anything pertinent to the above-noted deficiency of Cialone. Hildenbrand, in particular, discloses a structure for connecting only to an ink deriving tube, and thus could not possibly disclose anything concerning a connecting portion that connects to both an ink deriving portion tube and an air introducing tube.

It is therefore respectfully submitted that the claims herein are fully in condition for allowance, and such action is courteously solicited.

Turning to a formal matter, the Examiner is respectfully requested to indicate her consideration of the Information Disclosure Statement dated January 8, 2004.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office by telephone at (714) 540-8700. All correspondence should continue to be directed to our address given below.

Respectfully submitted,


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